1 Course Details

1.1 Calendar Description

This course is designed to explore details of evaluating feed ingredients and formulating diets for swine. Students will use models to evaluate various aspects of nutrient partitioning for growth and reproduction in pigs.

Pre-Requisites: ANSC*3120

1.2 Course Description

This is a course designed to explore details of evaluating feed ingredients and feeding programs for swine, as well as the use of pigs as models for other non-ruminant animals and humans, to better understand nutrition concepts. Students will use models to evaluate various aspects of nutrient partitioning for growth and reproduction in swine.

1.3 Timetable

Tuesdays and Thursday 8:30 a.m. to 9:50 a.m. - virtual

NOTE: Some lectures slots will be computer labs

1.4 Final Exam

NO FINAL EXAM
2 Instructional Support

2.1 Instructional Support Team

Instructor: Lee-Anne Huber  
Email: huberl@uoguelph.ca  
Telephone: +1-519-824-4120 x53347  
Office Hours: Please email for appointments.

- **Announcements**: The instructor will use Announcements on the Course Home page to provide you with course reminders and updates. Please check this section frequently for course updates from your instructor or TA.
- **Email**: If you have a conflict that prevents you from completing course requirements, or have a question concerning a personal matter, you can send your instructor a private message by email. The instructor will attempt to respond to your email within 24 hours.
- **Video Call**: If you have a complex question you would like to discuss with your instructor, you may book a video meeting on Webex (or alternate platform being used by your instructor). Video meetings depend on the availability and are booked on a first come first served basis.

**Technologies and synchronous delivery:**

>This course will use a variety of technologies including;

- CourseLink (main classroom)
- Webex
- Zoom

To help ensure you have the best learning experience possible, please review the list of system and software requirements.

https://opened.uoguelph.ca/student-resources/system-and-software-requirements

Lectures will be offered in a synchronous format, which means, during scheduled class time (i.e. Tues and Thurs - 08:30 - 10:00 am) you will be expected to log in to the Zoom...
meeting via CourseLink to view and participate in the lecture. A recording of the lecture will be uploaded to CourseLink after rendering. For Discussion Days, you will be required to log in to the lecture to participate in the class discussion - scheduling and further details are outlined in the Assessments Document.

CourseLink System Requirements

You are responsible for ensuring that your computer system meets the necessary system requirements. Use the browser check tool to ensure your browser settings are compatible and up to date. (Results will be displayed in a new browser window).

http://spaces.uoguelph.ca/ed/system-requirements/
https://courselink.uoguelph.ca/d2l/systemCheck

Course Technologies

CourseLink

This course is being offered using CourseLink (powered by D2L's Brightspace), the University of Guelph's online learning management system (LMS). By using this service, you agree to comply with the University of Guelph’s Access and Privacy Guidelines. Please visit the D2L website to review the Brightspace privacy statement and Brightspace Learning Environment web accessibility standards.

http://www.uoguelph.ca/web/privacy/ https://www.d2l.com/legal/privacy/
https://www.d2l.com/accessibility/standards/

Technical Support

If you need any assistance with the software tools or the CourseLink website, contact CourseLink Support.
Email: courselink@uoguelph.ca

Tel: 519-824-4120 ext. 56939 Toll-Free (CAN/USA): 1-866-275-1478

Support Hours (Eastern Time):

Monday thru Friday: 8:30 am–8:30 pm

Saturday: 10:00 am–4:00 pm

Sunday: 12:00 pm–6:00 pm

Zoom

This course will use Zoom for lectures. Check your system requirements to ensure you will be able to participate.

https://opened.uoguelph.ca/student-resources/system-and-software-requirements

Webex

This course may also use Webex for meetings with the instructor or TA. Webex is a web conferencing tool that allows participants to connect with others anywhere in the world through the use of video and/or audio as well as content sharing.

For support using Webex Support visit the CCS website.
Technical Skills

As part of your learning experience, you are expected to use a variety of technologies for assignments, lectures, teamwork, and meetings. In order to be successful in this course you will need to have the following technical skills:

- Manage files and folders on your computer (e.g., save, name, copy, backup, rename, delete, and check properties);
- Install software, security, and virus protection;
- Use office applications (e.g., Word, PowerPoint, Excel, or similar) to create documents;
- Be comfortable uploading and downloading saved files;
- Communicate using email (e.g., create, receive, reply, print, send, download, and open attachments);
- Navigate the CourseLink learning environment and use the essential tools, such as Dropbox, Quizzes, Discussions, and Grades (the instructions for this are given in your course);
- Access, navigate, and search the Internet using a web browser (e.g., Firefox, Internet Explorer); and
- Perform online research using various search engines (e.g., Google) and library databases.

Contact your course instructor if you need support with any of the above.

Netiquette Expectations

The course website is considered the classroom and the same protections, expectations, guidelines, and regulations used in face-to-face settings apply. Inappropriate behaviour will not be tolerated. Examples of inappropriate online behaviour include:

- Posting inflammatory messages about your instructor or fellow students;
- Using offensive language;
• Copying or presenting someone else's work as your own;
• Adapting information from the Internet without using proper citations or references;
• Buying or selling term papers or assignments;
• Posting or selling course materials to course notes websites;
• Having someone else complete your quiz or completing a quiz for/with another student;
• Stating false claims about lost quiz answers or other assignment submissions;
• Threatening or harassing a student or instructor;
• Discriminating against fellow students, instructors, and/or TAs;
• Using the course website to promote profit-driven products or services;
• Attempting to compromise the security or functionality of the learning management system; and
• Sharing your username and password.

**Dropbox Submissions**

Assignments should be submitted electronically via the online Dropbox tool. When submitting your assignments using the Dropbox tool, do not leave the page until your assignment has successfully uploaded. To verify that your submission was complete, you can view the submission history immediately after the upload to see which files uploaded successfully. The system will also email you a receipt. Save this email receipt as proof of submission.

Be sure to keep a back-up copy of all of your assignments in the event that they are lost in transition. In order to avoid any last-minute computer problems, your instructor strongly recommends you save your assignments to a cloud-based file storage (e.g., OneDrive), or send to your email account, so that should something happen to your computer, the assignment could still be submitted on time or re-submitted.

It is your responsibility to submit your assignments on time as specified on the Schedule. Be sure to check the technical requirements and make sure you have the proper computer, that you have a supported browser, and that you have reliable Internet access. Remember that technical difficulty is not an excuse not to turn in your assignment on time. Don’t wait until the last minute as you may get behind in your work.

If, for some reason, you have a technical difficulty when submitting your assignment electronically, please contact your instructor or CourseLink Support.

http://spaces.uoguelph.ca/ed/contact-us/
Late Policy

If you choose to submit assignments to the Dropbox tool late, the full allocated mark will be reduced by 10% per day after the deadline for the submission of the assignment to a limit of six days at which time access to the Dropbox folder will be closed.

Extensions will be considered for medical reasons or other extenuating circumstances. If you require an extension, discuss this with the instructor as soon as possible and well before the due date. Barring exceptional circumstances, extensions will not be granted once the due date has passed. These rules are not designed to be arbitrary, nor are they inflexible. They are designed to keep you organized, to ensure that all students have the same amount of time to work on assignments, and to help to return marked materials to you in the shortest possible time.

Grades and Feedback

Unofficial assessment marks will be available in the Grades tool of the course website.

Your instructor will attempt to have grades posted online within 2 weeks of the submission deadline, if the assignment was submitted on time. Once your assignments are marked you can view your grades on the course website by selecting Grades from the Tools dropdown menu on the navbar. Your course will remain open to you for seven days following the last day of the final exam period.

University of Guelph students can access their final grade by logging into WebAdvisor (using your U of G central ID).

https://webadvisor.uoguelph.ca

2.2 Teaching Assistants

<table>
<thead>
<tr>
<th>Teaching Assistant:</th>
<th>Elise Lafleur Lariviere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email:</td>
<td><a href="mailto:elafleur@uoguelph.ca">elafleur@uoguelph.ca</a></td>
</tr>
<tr>
<td>Office Hours:</td>
<td>please email for appointments</td>
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</tbody>
</table>
• **Email:** If you have questions regarding lecture or lab materials, you can send your TA a private message by email. The TA will attempt to respond to your email within 24 hours.

• **Video Call:** If you have a complex question you would like to discuss with your TA, you may book a video meeting on Webex (or alternate platform being used by your instructor). Video meetings depend on the availability and are booked on a first come first served basis. You can also meet as a group with the TA. Specific virtual help sessions for labs may be scheduled by the TA, based on need, which you may join per your help requirements. These opportunities will be communicated via the **Announcements** tool on Courselink.

### 3 Learning Resources

#### 3.1 Required Resources

**Field Trips (Other)**  
N/A

#### 3.2 Recommended Resources

**Nutrient Requirements of Swine (Textbook)**  

**Swine Nutrition (Textbook)**  

**Lab Manual and Guidelines (Lab Manual)**

• Lab manuals will be distributed as part of the lab assignments; software used in the laboratories are available for use outside the computer lab (via a web browser).

• Guidelines for review paper on topic in swine nutrition will be posted in Courselink and accessible throughout the term.

**Library Access (Website)**

**Library Access**
As a student, you have access to the University of Guelph’s library collection, including both physical and electronic materials. **You will need this resource to complete your literature review assignment.** For information on checking out or couriering physical library items, accessing electronic journals and returning items to the library, visit the library’s website.

If you are studying off campus and would like to access the library’s electronic resources, use the Off Campus Login and login using your Single Sign On credentials or using your last name and library barcode.

https://www.lib.uoguelph.ca/

https://www.lib.uoguelph.ca/campus-login

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### 4 Learning Outcomes

### 4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. Become familiar with means to evaluate and manipulate the feeding value of swine feed ingredients.
2. Become familiar with the basic concepts of nutrient utilization for growth and reproduction in swine.
3. Develop skills to critically evaluate swine feeding programs, including preparation of reports.
4. Develop awareness of current issues, challenges and opportunities in swine nutrition, including use of pigs as models for other non-ruminant animals and humans to better understand nutrition concepts.
5. Cultivate a basis for continued acquisition of knowledge and further development of skills in swine and non-ruminant nutrition.

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### 5 Teaching and Learning Activities

#### 5.1 Lecture
Thu, Sep 10
Topics: Course introduction & Lec 1. Digestive anatomy and physiology

Tue, Sep 15
Topics: Lec 2. Nutrients and anti-nutrients; nutrient availability I

Thu, Sep 17
Topics: Lec 3. Nutrients and anti-nutrients; nutrient availability II

Tue, Sep 22
Topics: Lec 4. Principles of nutrient partitioning for growth and reproduction I

Thu, Sep 24
Topics: Lec 5. Principles of nutrient partitioning for growth and reproduction II

Tue, Sep 29
Topics: LAB 1 - Assignment 1 Nutrient partitioning (due Oct 9, 2020; Dropbox)

Thu, Oct 1
Topics: NO LECTURE/work period for lab 1

Tue, Oct 6
Topics: Lec. 6 Swine feed ingredients I

Thu, Oct 8
Topics: Lec. 7 Swine feed ingredients II; feed additives

Tue, Oct 13
Topics: Fall study break - NO CLASSES or LAB

Thu, Oct 15
<table>
<thead>
<tr>
<th>Date</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue, Oct 20</td>
<td>Lec. 8 Feed manufacturing: feedstuffs, formulation, processing</td>
</tr>
<tr>
<td>Thu, Oct 22</td>
<td>LAB 2 - Assignment 2 NRC Model (due Oct 30, 2020; Dropbox)</td>
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<tr>
<td>Tue, Oct 27</td>
<td>NO LECTURE/work period for lab 2</td>
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<tr>
<td>Thu, Oct 29</td>
<td>GUEST LECTURE - OMAFRA; Dr. Laura Eastwood</td>
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<tr>
<td>Thu, Oct 29</td>
<td>Current scientific swine nutrition issues</td>
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<td>Tue, Nov 3</td>
<td>Lec. 9 Integrated nutrition - Starter pigs I</td>
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<tr>
<td>Thu, Nov 5</td>
<td>Lec. 9b Integrated nutrition - Starter pigs II</td>
</tr>
<tr>
<td>Tue, Nov 10</td>
<td>GUEST LECTURE - WFS; Quincy Buis, industry swine nutritionist</td>
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<tr>
<td>Thu, Nov 12</td>
<td>Student Lecture Discussion Day (Groups 1-4)</td>
</tr>
<tr>
<td>Tue, Nov 17</td>
<td>Lecture 10. Integrated nutrition - Growing/finishing pigs</td>
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<tr>
<td>Thu, Nov 19</td>
<td>Student Lecture Discussion Day (Groups 5-8)</td>
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Tue, Nov 24
Topics: Lecture 11. Integrated nutrition - Sows

Thu, Nov 26
Topics: Student Lecture Discussion Day (Groups 9-12)

Tue, Dec 1
Topics: Lecture 12. Apply your knowledge

Thu, Dec 3
Topics: Student Lecture Discussion Day (Groups 13-16)

6 Assessments

6.1 Marking Schemes & Distributions

This course is focused on applying nutrition concepts in practical scenarios. In particular, the laboratory assignments use commercial nutrient requirement models to explore nutrient partitioning, to estimate nutrient requirements, to formulate practical swine diets with least cost formulation software, and to understand other non-nutrition factors that influence how swine nutritionist formulate diets for producers. The distribution of grades is reflective of the focus of the course.

<table>
<thead>
<tr>
<th>Name</th>
<th>Scheme A (%)</th>
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<tbody>
<tr>
<td>Lab Assignments</td>
<td>35</td>
</tr>
<tr>
<td>Review Paper</td>
<td>20</td>
</tr>
<tr>
<td>Lecture Presentation</td>
<td>10</td>
</tr>
<tr>
<td>Infographic</td>
<td>10</td>
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<tr>
<td>Discussion Leader</td>
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</tr>
<tr>
<td>Progress Assessments</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
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6.2 Assessment Details

Lab Assignments (35%)
**Learning Outcome:** 1, 2, 3
- Familiarity with nutrient partitioning and utilization in swine, and concepts of least cost feed formulation, including relevant software
- Develop skills in using various computer programs

**Due Dates:**
Lab 1: Oct 9, due in Dropbox, 15%
Lab 2: Oct 30, due in Dropbox, 20%

- All submissions via dropbox in courselink
- **Late penalties: 10% per day overdue**

**Progress Assessments (15%)**
**Date:** Online
**Learning Outcome:** 1, 2, 4, 5
Online quizzes will be given regularly throughout the semester. To assess acquisition and integration of knowledge and information.

**Due Dates:**
- Friday, September 25
- Friday, October 15
- Friday, November 27

**Review Paper (20%)**
**Learning Outcome:** 2, 4, 5
Become familiar with relevant scientific literature on one specific aspect of swine nutrition. Work in a small group (2 people) to identify a relevant aspect of pig nutrition, identify and interpret appropriate scientific literature and write a critical analyses review paper. Further details found on courselink and in class.

Sept. 16, 5 PM; select topic and email to Dr. Huber (huberl@uougelph.ca)

**Due Date:** Monday prior to assigned 'Discussion Day' - 'Discussion Days' will be randomly selected during class on Sept. 17

Assessment of:
- Critical analyses of scientific concepts or commercial swine feeding practices

- Content, organization and clarity of written reports

- All submissions via dropbox in courselink

- **Late penalties: 10% per day overdue**

**Lecture Presentaton (10%)**

**Learning Outcome:** 2, 4, 5

As a group (2 people; i.e. same group as for the literature review), prepare a 15 minute PowerPoint presentation on the topic using the information from the literature review, pre-record, and post on courselink.

Marks will reflect clarity of the presentation (both visual and oral), organization and style of the lecture presentation, effective use of audiovisuals, creativity, and ability to answer questions from the audience and contribute to class discussions. Further details provided on courselink.

- All submissions via dropbox in courselink

**Due Date:** Monday prior to ‘Discussion Day’ – ‘Discussion Days’ will be randomly assigned to teams during class on September 17, 2020.

- **Late penalties: 10% per day overdue**

**Discussion Leader (10%)**

**Learning Outcome:** 2, 4, 5

As a group (2 people; same groups as for the literature review), carefully read your assigned literature review (i.e. from another group), provide a critical and constructive assessment (using information presented in the literature review, and outside sources, if necessary), and generate a list of discussion points and questions for the authors (no fewer than five). On the lecture discussion day, initiate a class discussion on the subject matter using the discussion points and questions generated during the assessment of the literature review (and others, if more questions arise when watching the presentation).
Marks will reflect depth, breadth, thoughtfulness, and apparent reader comprehension of the subject matter, as well as the ability to engage the class in discussion.

- All submissions via dropbox in courselink

**Due Date:** Due on ‘Discussion Day’ – ‘Discussion Days’ will be randomly assigned to teams during class on September 17, 2020.

- **Late penalties: 10% per day overdue**

**Infographic (10%)**
**Learning Outcome:** 2, 4, 5
Create an infographic containing the practical, take-home messages that would be of interest for a producer from your review topic. Each student will submit his/her own infographic and be graded individually. Further details found on courselink and in class.

Marks will reflect clarity and appropriateness of information presented (i.e. for the intended audience), organization, style, creativity, and visual appeal.

- All submissions via dropbox in courselink

**Due Date:** Thursday, December 3, 2020

- **Late penalties: 10% per day overdue**

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### 7 Course Statements

#### 7.1 Grading Policies

Due dates for assignments are indicated above. Assignments will be handed in lab or electronically (Dropbox, email). For late assignments, marks will be reduced by 10% for each day after the due date.

Detailed marking schemes are included in the assignments.
For the computer laboratories marks are given for presenting correct numerical values (about 35% of total) and the proper and concise interpretation of the numerical values (about 65%).

Details on grading schemes for assessments are presented in the 'Assessments' section and can be found in the 'Assessments Document' on CourseLink.

7.2 Group Work

For the computer laboratories students are encouraged to work in groups, but assignments need to be handed in and will be marked for individual students.

Students within groups (i.e. for Literature Review, Lecture Presentation, and Discussion Day) will be given the same marks, unless students within the group all agree - in writing - to an uneven distribution of marks.

8 University Statements

8.1 Email Communication

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

8.2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals
https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml

Graduate Calendar - Grounds for Academic Consideration
https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions
https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml

8.3 Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The
deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars.

Undergraduate Calendar - Dropping Courses
https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml

Graduate Calendar - Registration Changes
https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-regregchg.shtml

Associate Diploma Calendar - Dropping Courses
https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml

8.4 Copies of Out-of-class Assignments
Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

8.5 Accessibility
The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance and not later than the 40th Class Day.

For Guelph students, information can be found on the SAS website
https://www.uoguelph.ca/sas

For Ridgetown students, information can be found on the Ridgetown SAS website
https://www.ridgetownc.com/services/accessibilityservices.cfm

8.6 Academic Integrity
The University of Guelph is committed to upholding the highest standards of academic integrity, and it is the responsibility of all members of the University community-faculty, staff, and students-to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have
the responsibility of abiding by the University’s policy on academic misconduct regardless of
their location of study; faculty, staff, and students have the responsibility of supporting an
environment that encourages academic integrity. Students need to remain aware that
instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not
relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse
students from responsibility for verifying the academic integrity of their work before
submitting it. Students who are in any doubt as to whether an action on their part could be
construed as an academic offence should consult with a faculty member or faculty advisor.

Undergraduate Calendar - Academic Misconduct
https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-
amisconduct.shtml

Graduate Calendar - Academic Misconduct
https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml

8.7 Recording of Materials

Presentations that are made in relation to course work - including lectures - cannot be
recorded or copied without the permission of the presenter, whether the instructor, a student,
or guest lecturer. Material recorded with permission is restricted to use for that course unless
further permission is granted.

8.8 Resources

The Academic Calendars are the source of information about the University of Guelph’s
procedures, policies, and regulations that apply to undergraduate, graduate, and diploma
programs.

Academic Calendars
https://www.uoguelph.ca/academics/calendars

8.9 Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of
course offerings and academic schedules. Any such changes will be announced via
CourseLink and/or class email. All University-wide decisions will be posted on the COVID-19
website (https://news.uoguelph.ca/2019-novel-coronavirus-information/) and circulated by
email.

8.10 Illness

The University will not require verification of illness (doctor’s notes) for the fall 2020 or winter
2021 semesters.